

CONTACT INFORMATION Department of Mathematics
Middle East Technical University
Eskisehir Yolu
06800 Ankara, TURKEY

Office Phone: +90-(312) 210-2990
Fax: +90-(312) 210-2970
E-mail: pasemra@metu.edu.tr

PERSONAL INFORMATION

- Date of Birth : November 29, 1978
- Citizenship: Turkish
- Languages: Turkish, English (fluent)

EDUCATION

McMaster University, Hamilton, Ontario, CANADA
Ph.D. in Mathematics, May 2008.

- Thesis Title: Periodic Resolutions and Finite Group Actions
- Advisor: Ian Hambleton

Middle East Technical University, Ankara, TURKEY
M.S. in Mathematics, December 2002.

- Thesis Title: Connection Preserving Conformal Diffeomorphisms of Spheres
- Advisor: Cem Tezer

B.S. in Mathematics with high honors, January 2001 .

EMPLOYMENT HISTORY

- 2018-2019 Visiting Assistant Professor, McMaster University
- 2012-current Assistant Professor, Middle East Technical University
- 2009-2012 Instructor, Middle East Technical University
- 2008-2009 Postdoctoral Fellow, Koç University
- 2004-2008 Teaching Assistant, McMaster University
- 2001-2004, Teaching Assistant, Middle East Technical University

RESEARCH INTERESTS

Algebraic topology, in particular group actions on manifolds and CW-complexes, applied algebraic topology, cohomology of groups, and Mackey functors.

PUBLICATIONS

- Rank conditions for finite group actions on 4-manifolds, joint work with I. Hambleton, *Canad. J. Math.* Volume 74 , Issue 2 , April 2022 , pp. 550 - 572 DOI:10.4153/S0008414X21000018
- Discrete bifurcation diagrams and persistence, with T.Ornek, in preparation.
- Relative Cohomology and The Orbit Category, joint work with E. Yalçın (Communications in Algebra, Volume 42, Issue 7, July 2014, pp. 3220-3243, DOI: 10.1080/00927872.2013.776066)
- Equivariant CW-Complexes and The Orbit Category, joint work with I. Hambleton and E. Yalçın (in *Commentarii Mathematici Helveciti*, Volume 88, Issue 2, 2013, pp. 369-425, DOI: 10.4171/CMH/289)
- Projective Resolutions of Globally Defined Mackey Functors in Characteristic Zero,

joint work with Olcay Coşkun.
(Archiv der Math. 96 (2011), pp. 39 - 48,DOI:10.1007/s00013-010-0204-3)

TALKS GIVEN

- On Symmetries of 4-Manifolds, Mathematical Colloquium, Mathematical Institute of the Serbian Academy of Sciences and Arts, September 2022
- Dört Boyutlu Çokkatlılar Üzerine Etki Eden Sonlu Grupların Rank Koşulları, 33rd National Mathematics Symposium, Istanbul University, September 2021
- Israrcı Homoloji ve Türevleri, General Seminar, Istanbul University, April 2021
- Rank Conditions for Finite Group Actions on 4-Manifolds, General Seminar, Yeditepe University, March 2021
- Computational Algebraic Topology, 4th Workshop of the METU Mathematics Club, February 2020, METU
- Symmetries of 4-Manifolds, General Seminar, Mimar Sinan Fine Arts University, November 2019
- A Glimpse of Group Actions on Spaces, 4th Workshop of the Association for Turkish Women in Mathematics, April 2017, METU
- Periodic Maps on Simply Connected 4-Manifolds, Atılım Geometry Topology Workshop, May 2015, Atılım University
- S_5 action with rank 1 isotropy on a G-CW-complex homotopy equivalent to a sphere, ICM, August 2014, Seoul, Korea
- S_5 action with rank 1 isotropy on a G-CW-complex homotopy equivalent to a sphere, 28th Summer Conference on Topology and Its Applications, July 2013, Nipissing University, North Bay, Ontario, Canada
- S_5 action with rank 1 isotropy on a G-CW-complex homotopy equivalent to a sphere, Young Women in Topology, June, 2013, University of Bonn, Germany
- Relative Cohomology and The Orbit Category, 10th Ankara Mathematics Days, Çankaya University, June 2013
- Relative Cohomology and The Orbit Category, Algebraic Topology Seminar, Bilkent University, April 2012
- Equivariant CW-Complexes and The Orbit Category, Young Topologist Meeting, June 2010
- Equivariant CW-Complexes and The Orbit Category, Antalya Algebra Days XI, May 2009
- Periodic Resolutions and Finite Group Actions, Algebraic Topology Seminar, Bilkent University, October 2008
- Periodic Resolutions and Finite Group Actions, 21th National Mathematics Symposium, Koç University, September 2008
- Periodic Resolutions and Finite Group Actions, Bogaziçi University, June 2008
- Periodic Relative Projective Resolutions for Finite Groups, Grad. Topology Seminar, McMaster University, November 2007
- Poincaré Conjecture, Graduate Student Seminar, McMaster University, Winter 2006
- Coarse Geometry and Applications, Graduate Student Seminar, McMaster University, Fall 2005

CONFERENCES AND WORKSHOPS

- Four Manifolds: Confluence of High and Low Dimensions, June 08-12, 2019, The Fields Institute, Toronto, Canada
- Algebraic Topology: Methods, Computation and Science (ATMCS8), June 25-29, 2018, Institute of Science and Technology Austria (IST Austria), Vienna, Austria
- Applied Topology in Bedlewo, June 25-July 01, 2017, Instytut Matematyczny PAN, Poznan, Poland
- Workshop on Group Actions-Classical and Derived, June 13-17, 2016, The Fields Institute, Toronto, Canada

- The 17th EWM General Meeting, August 31-September 4, 2015, Cortona, Italy
- Conference on Geometry and Topology, August 17-21, 2015, Hausdorff Center for Mathematics, Bonn, Germany
- Summer School on Computational Topology, June 22-25, 2015, Ljubljana, Slovenia
- International Congress of Mathematicians, August 13-21, 2014, Seoul, Korea
- Manifolds, K-Theory and Related Topics, June 23-27, 2014, Dubrovnik, Croatia
- 28th Summer Conference on Topology and Its Applications, July 23-26, 2013, Nipissing University, North Bay, Canada
- Low-dimensional Topology after Floer, July 8-12, 2013, CRM, Montreal, Canada
- Young Women in Topology, June 7-9, 2013, University of Bonn, Germany
- 19 th Gökova Geometry and Topology Conference, Turkey, May 28-June 2 2012
- Workshop on Homotopical Approaches to Group Actions at Copenhagen, Denmark, August 22-26 2011
- Topology of Manifold, Summer School at Budapest, Hungary, August 15-19 2011
- 18 th Gökova Geometry and Topology Conference, Turkey, May 30-June 4 2011
- Summer School on Topology of Manifold at Krakow, Poland, August 23-27 2010
- Young Topologist Meeting at Copenhagen, Denmark, June 16-20 2010
- 17 th Gökova Geometry and Topology Conference, Turkey, May 31-June 5 2010
- Glimpses of Group Representation Theory Winter School, Feza Gürsey Institute, Turkey, February 8-12 2010
- Geometry and Topology at Münster, Germany, June 1-5 2009
- 16 th Gökova Geometry and Topology Conference, Turkey, May 25-29 2009
- Antalya Algebra Days XI, Turkey, May 20-24 2009
- 21 th National Mathematics Symposium, Koç University, Sep. 2008
- 15 th Gökova Geometry and Topology Conference, Turkey, May 26-30 2008
- CMS Winter 2007 Meeting, London, Canada, December 8-10 2007
- 12 th Gökova Geometry and Topology Conference, Turkey, May 30-June 04 2005
- Summer School on Floer Homology, Gauge Theory and Low Dimensional Topology, Budapest, Hungary June 05-26 2004
- 11 th Gökova Geometry and Topology Conference, Turkey, May 24-29 2004
- Conference on Geometry and Topology of Manifolds, McMaster University, Canada, May 14-18 2004
- 10 th Gökova Geometry and Topology Conference, Turkey, May 26-31 2003
- 9 th Gökova Geometry and Topology Conference, Turkey, May 27-June 01 2002
- Workshop on Singularity Theory, Istanbul, Turkey, June 25-29 2001

TEACHING
EXPERIENCE

Middle East Technical University,

- Math 771 Homological Algebra:, Fall 2015-2016, Fall 2016-2017, Fall 2017-2018, Fall 2020-2021
- Math 737 Vector Bundles and Characteristic Classes:Fall 2013-2014
- Math 728 Homological Methods in Topology:Spring 2020-2021
- Math 701 Homotopy Theory:Spring 2021-2022
- Math 538 Algebraic Topology II: Spring 2012-2013
- Math 537 Algebraic Topology I: Fall 2012-2013
- Math 505 Differentiable Manifolds: Spring 2014-2015
- Math 457 Calculus on Manifolds: Fall 2019-2020
- Math 423 Introduction to computational Topology: Fall 2021-2022
- Math 422 Elementary Geometric Topology: Spring 2017-2018, Spring 2019-2020
- Math 420 Elementary Point-Set Topology: Fall 2014-2015
- Math 368 Field Extensions and Galois Theory: Spring 2011-2012
- Math 367 Abstract Algebra: Fall 2011-2012
- Math 254 Differential Equations: Spring 2021-2022
- Math 252 Advanced Calculus II: Spring 2016-2017

- Math 251 Advanced Calculus I : Spring 2014-2015, Spring 2015-2016, Fall 2016-2017
- Math 154 Calculus for Mathematics Students II: Spring 2012-2013, Summer 2014
- Math 153 Calculus for Mathematics Students I: Fall 2012-2013
- Math 116 Basic Algebraic Structures: Spring 2009-2010, Spring 2010-2011, Spring 2011-2012
- Math 111 Fundamentals of Mathematics: Fall 2010-2011, Fall 2020-2021
- Math 260 Basic Linear Algebra : Fall 2012-2013, Spring 2013-2014, Spring 2015-2016, Spring 2017-2018, Fall 2019-2020, Spring 2019-2020, Spring 2020-2021
- Math 219 Introduction to Differential Equations: Fall 2014-2015, Fall 2015-2016, Fall 2016-2017, Spring 2016-2017, Fall 2017-2018, Fall 2021-2022
- Math 120 Calculus of Functions of Several Variables: Spring 2009-2010, Spring 2010-2011, Summer 2011
- Math 119 Calculus With Analytic Geometry: Fall 2009-2010, Summer 2010 at METU-NCC, Fall 2010-2011, Fall 2011-2012, Fall 2013-2014

McMaster University,

- Winter 2004-Fall 2007, Teaching Assistant for; Math 3BO3: Differential Geometry, Math 4BO3: Calculus on Manifolds, Math 2QO4: Advanced Calculus for Engineering II, Math 3ZO3: History of Mathematics, Math 3B03: Geometry, Math 3EE3: Algebra II, Math 1HO3: Linear Algebra for Engineering, Math 1NN3: Calculus for Engineering II, Math 1NO3: Calculus for Engineering I

CONFERENCE
ORGANIZER

- 4th Workshop of the Association for Turkish Women in Mathematics, April 2017, Ankara, Turkey
- 3rd Workshop of the Association for Turkish Women in Mathematics, May 2016, Izmir, Turkey
- 2nd Workshop of the Association for Turkish Women in Mathematics, May 2015, Sivas, Turkey
- 10th Ankara Mathematics Days, June 2015, Ankara, Turkey

DEPARTMENTAL
DUTIES

- Member of Faculty Board, December 2019-
- Department Graduate Committee Member, March 2017-
- Department Associate Chair, January 2012-January 2015
- Department Erasmus Coordinator, 2009-2011

GRADUATE
STUDENTS

- Turkmen Örnek (PhD. *Discrete bifurcation diagrams and persistence*, Applied Algebraic Topology, finished in August 2018)
- Alev Meral (PhD. *Sonlu işaretilenmiş noktalı tor yüzeylerinde genelleştirilmiş Dynnikov koordinatları*, Geometric Topology, finished in July 2019, Dicle University, co-advisor)
- Ebru Adıgüzel (MSc. *On equivelar triangulations of surfaces*, Combinatorial Topology, finished in August 2018)
- Dilan Karagüler (MSc. *A survey on multidimensional persistence theory*, Applied Algebraic Topology, finished in August 2021)
- Damla Erdoğan (MSc. *On extending group actions from surfaces to three spheres*, Geometric Topology, finished in June 2022)
- Selçuk Gürses (MSc. *A survey on persistence landscape theory*, Applied Algebraic Topology, finished in July 2022)
- Basak Küçük (MSc. *Finite group actions on 4-manifolds*, Algebraic Topology, finished in July 2022)
- M. Erkam Özdemir (MSc. *working on group actions on manifolds*, Algebraic Topol-

ogy, current)

REFEREE

- Hacettepe Journal of Mathematics
- Turkish Journal of Mathematics
- Reviewer for AMS Mathematical Reviews

MEMBERSHIP

- American Mathematical Society
- Turkish Mathematical Society
- Association for Turkish Women in Mathematics
- European Women in Mathematics (Country Coordinator for Turkey)
- IMU-Committee for Women in Mathematics (Ambassador of Turkey)